

Reply to Office Action dated October 17, 2008

**REMARKS**

Claims 1, 3, 7, 9, 11-13, 26-30, 39 and 44-52 are pending in the application. By this Amendment, the specification and claims 1 and 26-27 are amended, claims 40-41 are canceled without prejudice or disclaimer and new claims 46-50 are added. Various amendments are made for clarity and are unrelated to issues of patentability.

The Office Action objects to the disclosure because of informalities. It is respectfully submitted that the above amendments obviate the grounds for objection. Withdrawal of the objection is respectfully requested.

The Office Action rejects claims 1, 3, 7, 9, 26-28, 30 and 39-41 under 35 U.S.C. §102(b) by U.S. Patent Publication 2002/0036466 to Tanaka et al. (hereafter Tanaka). The Office Action also rejects claims 11-13, 29 and 44-45 under 35 U.S.C. §103(a) over Tanaka in view of U.S. Patent 6,514,111 to Ebihara et al. (hereafter Ebihara). The rejections are respectfully traversed with respect to the pending claims.

Independent claim 1 recites a first substrate, a second substrate, a plurality of address electrodes on the second substrate, the address electrodes extending in a first direction, a plurality of other electrodes on the first substrate, the other electrodes extending in a second direction different than the first direction, and a plurality of barrier ribs on the second substrate to form a plurality of discharge cells, the plurality of barrier ribs extending in the first direction. Independent claim 1 also recites a sealing layer located between the first substrate and the second substrate, the sealing layer extending in the second direction, wherein the sealing layer

Reply to Office Action dated October 17, 2008

has a thermal expansion coefficient of approximately  $65 \times 10^{-7} \sim 80 \times 10^{-7} / ^\circ\text{C}$ . Independent claim 1 further recites at least one of a buffer layer or a dielectric layer formed between the first substrate and the sealing layer, wherein the at least one of the buffer layer or the dielectric layer has the following composition: PbO at a ratio of 45% to 55%, B<sub>2</sub>O<sub>3</sub> at a ratio of 10% to 20% and SiO<sub>2</sub> at a ratio of 15%-25%. Independent claim 1 also recites a protective film formed on the at least one of the buffer layer or the dielectric layer, wherein the at least one of the buffer layer or the dielectric layer has a thermal expansion coefficient different from the thermal expansion coefficient of the sealing layer.

The applied references do not teach or suggest at least these features of independent claim 1. More specifically, the Office Action (on pages 3 and 10) states that Tanaka's partition wall 24 (FIG. 2) corresponds to the claimed sealing layer. However, as is well known to one skilled in the art, the partition wall 24 corresponds to a barrier rib. Tanaka's partition walls 24 are not a sealing layer. It is well known to one skilled in the art that partition walls/barrier ribs do not correspond to a sealing layer of a plasma display panel.

Tanaka does not teach or suggest a plurality of address electrodes extending in a first direction, a plurality of other electrodes extending in a second direction, a plurality of barrier ribs extending in the first direction and a sealing layer extending in the second direction. Tanaka's partition walls 24 extend in a same direction as the address electrodes 22. The partition walls 24 do not extend in a same direction as the discharge electrodes 12. See also Tanaka's FIGs. 3-4 and

Reply to Office Action dated October 17, 2008

9A. Tanaka's FIG. 2 does not show a sealing layer extending in the second direction and other electrodes extending in the second direction.

In view of the above, Tanaka does not teach or suggest the claimed sealing layer. Tanaka also does not teach or suggest a sealing layer that has a thermal expansion coefficient of approximately  $65 \times 10^{-7} \sim 80 \times 10^{-7} / ^\circ\text{C}$ . Still further, Tanaka does not teach or suggest that at least one of the buffer layer or the dielectric layer having a thermal expansion coefficient different than the thermal expansion coefficient of the sealing layer.

For at least these reasons, Tanaka does not teach or suggest all the features of independent claim 1. Ebihara does not teach or suggest the features of independent claim 1 missing from Tanaka. Thus, independent claim 1 defines patentable subject matter.

Independent claim 26 recites a first substrate, a second substrate, a plurality of address electrodes on the second substrate, the address electrodes extending in a first direction, a plurality of other electrodes on the first substrate, the other electrodes extending in a second direction, a plurality of barrier ribs on the second substrate, the plurality of barrier ribs extending in the first direction, and a sealing layer between the first substrate and the second substrate, the sealing layer provided along the second direction, wherein the sealing layer has a thermal expansion coefficient of approximately  $65 \times 10^{-7} \sim 80 \times 10^{-7} / ^\circ\text{C}$ . Independent claim 26 also recites at least one of a buffer layer or a dielectric layer formed between the first substrate and the sealing layer, wherein the at least one of the buffer layer or the dielectric layer has a thermal expansion coefficient of approximately  $72 \times 10^{-7} / ^\circ\text{C}$  to  $85 \times 10^{-7} / ^\circ\text{C}$ , and wherein the thermal expansion

coefficient of the at least one of the buffer layer or the dielectric layer is different from the thermal expansion coefficient of the sealing layer.

For at least similar reasons as set forth above, the applied references do not teach or suggest the features of independent claim 26. More specifically, Tanaka (and Ebihara) does not teach or suggest a plurality of other electrodes extending in a second direction and a sealing layer provided along the second direction, as recited in independent claim 26. Thus, independent claim 26 defines patentable subject matter.

For at least the reasons set forth above, each of independent claims 1 and 26 defines patentable subject matter. Each of the dependent claims depends from one of the independent claims and therefore defines patentable subject matter at least for this reason. In addition, the dependent claims recite features that further and independently distinguish over the applied references.

For example, dependent claim 47 recites the sealing layer is provided from the second substrate toward the first substrate to a height greater than a height of each of the plurality of barrier ribs. See also dependent claims 46 and 50. Tanaka's partition walls 24 are not provided to a height greater than a height of each of a plurality of barrier ribs. Thus, dependent claims 46, 47 and 50 define patentable subject matter at least for this additional reason.

Dependent claim 48 recites a phosphor formed on the plurality of barrier ribs, wherein the sealing layer is provided from the second substrate to a height that is greater than a height of the phosphor on the barrier ribs. See also dependent claim 51. Tanaka and Ebihara do not teach

Serial No. **10/830,068**

Docket No. **YHK-0135**

Reply to Office Action dated October 17, 2008

or suggest these features. Tanaka does not suggest a sealing layer is provided from the second substrate to a height that is greater than a height of the phosphor on the barrier ribs. Thus, dependent claims 48 and 51 define patentable subject matter at least for this additional reason.

### **CONCLUSION**

In view of the foregoing, it is respectfully submitted that the application is in condition for allowance. Favorable consideration and prompt allowance of claims 1, 3, 7, 9, 11-13, 26-30, 39 and 44-52 are earnestly solicited. If the Examiner believes that any additional changes would place the application in better condition for allowance, the Examiner is invited to contact the undersigned attorney at the telephone number listed below.

To the extent necessary, a petition for an extension of time under 37 C.F.R. 1.136 is hereby made. Please charge any shortage in fees due in connection with the filing of this, concurrent and future replies, including extension of time fees, to Deposit Account 16-0607 and please credit any excess fees to such deposit account.

Respectfully submitted,  
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